

# Backsliding in Science

By Joshua Lederberg

THE UNITED STATES professes to absolute world leadership in science and technology and in standards of living. It is no self-criticism to note how urgently we react to challenges to that leadership.

## Science and Man

In 1957, Sputnik triggered a major response, not only in the inauguration of our space program, but also in a critical self-examination of our position in science and education. The results have been mainly to the good. If we now seem to be backsliding in public support for science, it may be partly attributable to the very success of the catch-up effort in space.

There are many other aspects of the human use of science in which we are demonstrably backward. Perhaps none is more vexing than our relative position in infant health and survival.

In 1960, Sweden reported an infant mortality of only 1.66 per cent. We showed 2.57. The nine-tenths of a percentage point difference amounted to 35,000 infants.

President Johnson has demanded greater attention to practical benefits from our health research programs. The more power to him for hammering home such discrepancies as challenges to our human security at least as important as Sputnik was!

THE PRESIDENT'S admonitions were sternly delivered to heads of health and research agencies at a meeting June 27 and have been re-echoed in many editorials in newspapers and science journals and by congressional comments.

Sen. Frank Harris (D-Okla.) and his Subcommittee on Government Research have held a series of hearings and seminars in which I have

been gratified to join. The positive benefit of urgent attention to health applications is undeniable. There are, however, grave dangers that hasty actions may be undertaken at any cost, without collecting the knowledge needed for sound policy.

Some of my colleagues fear that hard-won advances in support of basic research and higher education are in jeopardy. Stringent cutbacks that I, like others, have already experienced in grant support from the National Institutes of Health reinforce that fear.

Even more threatening is the danger that our reaction will be misinterpreted as indifference to the social aims expressed by the President. Basic research has, however, a rather complex set of social justifications and tends to be the first target of budget retrenchments, whether for Vietnam or for the Great Society.

Any redirection of research goals may also be confused with a political drive for wider geographic participation by underdeveloped states in a new pork-barrel approach to the allocation of health research and development funds.

The fundamental danger is a confused opposition of basic research versus social benefit, which is preposterous. New mechanisms must surely also be developed for the building of health technology on the foundation of this basic research. The competition of priorities should then be among investments in different fields—health as against military defense and foreign aid, urban development, the supersonic transport, environmental pollution, manned spaceflight after Apollo and so on.

THESE CATEGORIES are not completely insulated from one another. The SST may be a source of new health problems (sonic pollu-

tion and time-shift) demanding deeper biological studies. Programs for purer air and water can have great benefits for public health. Even the least scientifically oriented parts of the space programs are bound to have useful technological spillovers for health. Foreign aid without intense support of world health would be inane.

Indeed, most of our excess infant deaths per annum reflect social pathology as much as medical deficiencies. The poor states like Mississippi; and our urban slums, have the most disgraceful records. Can we believe that the Job Corps and basic medical research should be competing with one another, without reference to the priority they should both have in comparison with other commitments of Federal action?

Infant mortality has long been a barometer of social progress. The wisest action on a broad front will require careful investigation of many issues besides research and education. It should be obvious, however, that the availability of medical progress can be no better than the size and quality of the professional manpower to develop and disseminate it.

Congress has had many proposals for support of medical education, and particularly for fellowships for medical students. Our acute needs for more and better doctors demand more rigorous attention than Congress has so far been willing to give.

© 1966, The Washington Post Co.